

15th MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE
IHO-CBSC15
Paramaribo, Suriname, 7-9 June 2017

REPORT

1. Opening remarks, introductions and administration

The 15th Meeting of the IHO Capacity Building Sub-Committee (CBSC) took place in Paramaribo hosted by the Maritime Authority Suriname (MAS) from 7 to 9 June 2017. The meeting was opened by Mr Michel Amafo, MAS Director, and Mr Thomas Dehling, Chair of the Capacity Building Sub-Committee. The meeting was also attended by the Chair of the MAS Supervisory Board, Mr. Theo Vishnudatt.

Participants performed the national anthem of Suriname and heard wise words from Reverend Ds. M. Veldkamp. Mr. Amafo welcomed the participants and highlighted the opportunity to MAS to strengthen the national capacity, to network with participants and to liaise with the neighboring countries.

The Chair welcomed the participants and expressed the benefits of having a meeting in the MACHC, one the regions where the IHO puts a lot of efforts. He also thanked the hosts for the solid preparation for the meeting, noted the progress made in Suriname to strengthen the Maritime and Hydrographic capacities working together.

The Chair also highlighted the importance of the presence of IALA joining forces to "deliver as one". Mrs Gerardine Delanoye and the trainees of the IALA Aids to Navigation Manager Course attended some sessions of the meeting.

2. Approval of Agenda

Doc: CBSC15-02 Agenda and Timetable (Chair)

Participants were invited to comment the agenda and timetable. Agenda was adopted.

3. Matters arising from Minutes of CBSC14 Meeting

Docs: CBSC15-03A Minutes of CBSC14 (Chair)

CBSC15-03B Status of Action List from CBSC14 (IHO Sec)

Participants reviewed and approved the CBSC14 Minutes and List of Actions.

4. Reports by the Chair and the IHO Secretariat

Docs: CBSC15-04A Report by the Chair (Chair)

CBSC15-04B Report by the IHO Secretariat (IHO Sec)

The Chair introduced report (*doc. CBSC15-04A*) and started by assessing the impact of the IHO CB Strategy in planning and executing the CB Work Programme (CBWP). He stressed the urgent need for additional support from the Secretariat due to the continued increase in the level of CB activities in the past five years, the smooth execution of the 2016 CBWP due to the maturity of the processes, the good preparation of the CB Coordinators, the correct and timely provision of documents and the good support from the IHO Secretariat.

The Chair noted the extraordinary and generous contributions from Republic of Korea and the Nippon Foundation of Japan which has been a major factor in the success of CB. He also reported on the cancelation of the planned CB meeting of the IHO, IMO, WMO, IOC, IALA,

IAEA and FIG that should have happened at the IMO and the next meeting to be held at the IALA Headquarters. He also stressed that the success of comprehensive projects depends on good cooperation and that the IMO Member States that are not IHO Member States are now in disadvantage without support for Phase 2 (Surveying) and Phase 3 (Charting).

He invited the CBSC to consider the need to further improve the execution of technical visits, the production of the visit reports and the development of the CB Procedure 9 on technical visits. It was noted the need for Members to engage at national level to attract available expertise for the development of comprehensive projects, the second CB Stakeholders' Seminar planned for 2019 and how to include and extend contributions from developed Member States to CB.

The Secretary introduced the IHO Secretariat Report (*doc. CBSC15-04B*) and informed the meeting on the impact of the entry into force of the Amendments to the IHO Convention to the work of the CBSC, in particular that matters submitted to the IRCC will be reported to the Council that will then refer endorsed proposals for adoption either to the Assembly or to the Member States through correspondence, the change in the planning cycle for the IHO work programme and budget, the simplified process for coastal States to join the IHO and the voting process by correspondence. He also informed the meeting on the status of the IHO Membership and the need to convey the message to join the IHO when delivering CB activities to non-Member States and emphasized the International Hydrographic Review (IHR) as a tool to promote CB.

The meeting discussed the impact of the lack of participation of the IMO in joint activities with the IHO and agreed on the following decision and action:

Decision 1: to note the reports under agenda item 4 (*docs. CBSC15-04A and CBSC15-04B*).

Action 1: Secretary to write to the CB Coordinators the history of cooperation with the IMO (papers) and the actions requested for interacting with their maritime authorities (deadline: June 2017).

5. Regional Assessment of CB Activities

5.1 Reports of the Regional Hydrographic Commissions (RHC)

<i>Docs: CBSC15-05.1A</i>	<i>NSHC Report</i>
<i>CBSC15-05.1B</i>	<i>MBSHC Report</i>
<i>CBSC15-05.1C</i>	<i>BSHC Report</i>
<i>CBSC15-05.1D</i>	<i>USCHC Report</i>
<i>CBSC15-05.1E</i>	<i>EAHC Report</i>
<i>CBSC15-05.1F</i>	<i>EAtHC Report</i>
<i>CBSC15-05.1G</i>	<i>SEPRHC Report</i>
<i>CBSC15-05.1H</i>	<i>SWPHC Report</i>
<i>CBSC15-05.1I</i>	<i>MACHC Report</i>
<i>CBSC15-05.1J</i>	<i>SAIHC Report</i>
<i>CBSC15-05.1K</i>	<i>NIOHC Report</i>
<i>CBSC15-05.1L</i>	<i>RSAHC Report</i>
<i>CBSC15-05.1M</i>	<i>SWAtHC Report</i>

RHC Members and CB Coordinators were invited by the Chair to update the meeting on the status of C-55, report on visits (high-level, technical and follow-up) and report on courses, workshops and seminars.

a) CBSC15-05.1A NSHC Report

The NSHC (and also NHC and ARHC) CB Coordinator presented an oral report and informed the meeting on the support provided by Norway to Albania with scholarship for a Category "A" hydrographic education, support for ENC production and employing one dedicated staff Mr. Noralf Slotsvik. He also expressed that Norway plans to provide the same level of support to Montenegro and reported the support provided by PRIMAR in ENC production for developing countries.

b) CBSC15-05.1B MBSHC Report

The CB Coordinator (Turkey) introduced the report (*doc. CBSC15-05.1B*) and presented the CB activities in the region since the last meeting and the plans for the 2017 activities and the arrangements to hold the activities in the low season in order to make best use of the resources.

c) CBSC15-05.1C BSHC Report

The Chair presented an oral report about the activities in the region that can have a potentially beneficial impact elsewhere, like the FAMOS Project funded by the European Union (EU) and by EU Member States, led by Sweden using project experts from government agencies. He highlighted that the use of such experts can eventually be found in other Member States for the benefit of the IHO CB activities.

He also reported on the progresses done in Lithuania in raising awareness of the importance of being an IHO Member State and on the provision of hydrographic services. The meeting agreed on the following actions:

Action 2: Chair to provide the FAMOS documents and references for the CBSC Members (done during the meeting).

Action 3: Secretary to upload the FAMOS documents and references to the IHO website (deadline: June 2017).

d) CBSC15-05.1D USCHC Report

The USCHC CB Coordinator introduces the report (*doc. CBSC15-05.1D*) and informed the meeting on the creation of the Canadian Ocean Mapping Research and Education Network (COMREN) that will be reported at agenda item 6. He also reported on the second Chart Adequacy Evaluation Workshop by NOAA, University of New Hampshire (JHC), and GEBCO co-sponsored by the UKHO with 15 participants from 13 nations attending. The workshop provided training regarding a chart adequacy assessment procedure using automatic-identification system (AIS) data and satellite-derived bathymetry (SDB).

The meeting received the notice that the third Chart Adequacy Evaluation Workshop will be held on 11-13 July 2017 with the participation from Argentina, Egypt, Israel, Japan, Russia, Philippines, Panama, Nigeria, Thailand, Madagascar, Mauritius and Spain.

He noted that NOAA also provided ENC training to Israel (Survey of Israel) and Denmark (Danish Hydrographic Office). The meeting was also informed on the hydrographic training and education programmes available in USA with two IBSC-recognized Category "A" and one Category "B" programmes, and the two new Category "B" trainings in Nautical Cartography at NOAA and NGA starting in 2017.

He also reported on the new annual event in collaboration with GEBCO and the Cartography and Geographic Information Society (CaGIS) to promote nautical cartography and the open house event on Nautical Cartography, both held in conjunction with the 2017 International Cartographic Conference (ICC). He also noted the preparation for the forthcoming technical

visit to Haiti by NGA, SHOM (France) and DHN (Brazil). The meeting agreed on the following action:

Action 4: USCHC to report the outcomes of the Nautical Cartography events taking place during the 2017 International Cartographic Conference (ICC) to CBSC (deadline: CBSC16).

e) CBSC15-05.1E EAHC Report

The EAHC CB Coordinator introduced the report (*doc. CBSC15-05.1E*) and informed the meeting on the work of the EAHC Training, Research and Development Centre (TRDC) and the recently conducted SWOT analysis for long term plan to identify strengths, weaknesses, opportunities and threats faced in the region. He also reported the CB activities in the region funded by the IHO and by other agencies.

f) CBSC15-05.1F EAthC Report

The EAthC CB Coordinator introduced the report (*doc. CBSC15-05.1F*) and reported the current challenges in the region with increasing maritime activities with consequent urgent need to increase hydrographic capabilities, the need to improve the maritime geospatial knowledge, improve the access to relevant training and to find means to enable trainees to put in practice the training received, in particular with respect to the lack of equipment.

The meeting was informed on the outcomes of the participation of EAthC and IHO representatives to the Extraordinary Summit of the Assembly of the African Union on Maritime Security, Safety and Development in October 2016 in Lomé, Togo, and on the recent Technical Visit to Cabo Verde in March 2017, following a country request to the IHO for the preparation to the IMSAS (IMO Member State Audit Scheme). The CBSC supported this extraordinary submission that was approved intersessionally.

He also reported the IHO experimentation on e-learning developed by SHOM (France) and CIDCO (Canada) initiated in 2016, aiming at improving the access to maritime safety information (MSI) knowledge through distance-learning methodologies. The first step was the development of francophone e-learning material based on regular maritime safety information academic courses and the delivery of the e-learning platform in April 2017. This is a 5-week tutored training delivered in May/June 2017 with 13 trainees from Côte d'Ivoire, Gabon, Guinea, Togo, Haiti, Comoros, IALA and IHO.

The meeting noted the participation of the EAthC CB Coordinator in the WWNWS8 meeting in Alesund in September 2016, as a consequence of Action CBSC14/36. During that meeting a dedicated CB session was organized to address challenges and to improve the cooperation between WWNWS and CBSC, including delivery of courses, preparation of instructors, growing need for training and use of e-learning and blended-learning tools.

Lastly, the EAthC CB Coordinator reported on his participation to the 4th IOCAFRICA Conference in March 2017 in Alexandria, Egypt, and to the CIDCO Conference in May 2017 in Rimouski, Canada, to present the outcomes and concepts of the HydroMAOC definition study supported by IHO in 2016.

g) CBSC15-05.1G SEPRHC Report

The representative of the SEPRHC CB Coordinator introduced the report (*doc. CBSC15-05.1G*) and informed the meeting on the status of CB Phase Stage of coastal States in the region, the activities executed after the last meeting, the planned activities for 2017 and the cooperation with the neighboring regions (SWAtHC and MACHC).

He highlighted the challenges in the region with increasing levels of required hydrographic services by the maritime community and governmental agencies, for more diversified number

of products to improve the efficiency and safety of their activities. In order to fulfill such requirements, Member States are challenged to improve their technical capabilities to operate hydrographic equipment and software for data collection and processing, to improve the marine geospatial information infrastructure and to provide quality assurance for their ENC's.

The meeting discussed the difficulties in having the CB coordinator rotating with the Chair and the risks to the region, and considered ways to raise awareness of the importance of Hydrography in Panama. The following actions were agreed:

Action 5: SEPRHC to consider inviting Panama for the SEPRHC13 meeting (deadline: July 2017).

Action 6: SEPRHC to consider having a permanent CB Coordinator in the region (deadline: August 2017).

h) CBSC15-05.1H SWPHC Report

The representative of the SWPHC CB Coordinator introduced the report (*doc. CBSC15-05.1H*) and reported the status of CB Phase Stage of coastal States in the region, the activities executed since the last meeting, including technical visits to Samoa and Tuvalu, a MSI workshop and a technical workshop for the Pacific Islands, Countries and Territories (PICT). He particularly noted the importance of having technical workshops preceding the RHC Conferences in order to attract and support participation from developing countries.

He also informed the meeting on the planned CB activities for 2017 and the continuation of the New Zealand (NZ) Pacific Region Navigation Initiative (PRNI), a 5-year programme focusing on navigation-related aspects of maritime safety in a partnership between NZ Ministry of Foreign Affairs and Trade (MFAT), Land Information NZ (LINZ) and the Pacific Community (SPC).

The meeting was informed on the PRNI five output areas Pacific-wide Data Discovery, Hydrography Risk Assessments (Niue, Samoa and Tokelau), Capability/Capacity Building, Mitigation Measures and Pacific-wide Partnerships. Achievements related to PRNI strongly contribute and are aligned to the IHO CB activities.

He also stressed the challenges faced in the region with its large geographical extent and associated high costs of travel and limited opportunities for meetings, the limited capacity of the Capacity Builders and the increasing, potentially too much, requests to the RHCs and RHC Chairs which then impacts delivery of their own HO and RHC based activities. He also stressed the need for additional support from the IHO Secretariat for CB-related activities.

The meeting noted that all PICTs have made progress on hydrographic activities, and in the case of Fiji, Papua New Guinea, Solomon Islands, Tonga and Vanuatu it has been significant. Vanuatu became an IHO Member in 2017 and Solomon Islands is in the process of becoming a Member. Samoa, Vanuatu and Cook Islands established their National Hydrographic Coordinating Committee.

It was also noted that NZ developed a GIS-based risk assessment methodology to determine surveying and charting priorities, and to date has effectively used this for work in the Cook Islands, New Zealand, Niue, Tonga and Vanuatu. NZ Risk Assessment and PRNI will be further considered under agenda item 6.

The meeting was informed on the inability of Solomon Islands to recruit a new cartographer and thus the impossibility of executing activity P-5 of the 2017 CBWP. The meeting agreed on the following decisions:

Decision 2: to cancel activity P-5 of the 2017 CBWP. CB Coordinator consider submitting a new proposal when a new cartographer is recruited.

Action 7: Secretary to update the 2017 CBWP to reflect Decision 2 (deadline: June 2017).

Decision 3: to note the value and effectiveness of preceding RHC meetings with CB-related workshops.

Decision 4: to note SWPHC's commitment in carrying forward hydrographic, nautical cartographic and capacity building activities in close alignment with IHO objectives and goals.

i) CBSC15-05.1I MACHC Report

The MACHC CB Coordinator introduced the report (*doc. CBSC15-05.1I*) and reported the changes in the 3-year Work Plan, the activities executed since the last meeting, the cooperation with the Mexican FOCAHIMECA project and with the neighboring RHCs (SEPRHC and SWAtHC), and the planned activities for 2017, including two technical visits to Dominican Republic and El Salvador.

j) CBSC15-05.1J SAIHC Report

The SAIHC CB Coordinator introduced the report (*doc. CBSC15-05.1J*) and reported the changes in the 3-year Work Plan, the activities executed since the last meeting and the planned activities for 2017.

k) CBSC15-05.1K NIOHC Report

The NIOHC CB Coordinator introduced the report (*doc. CBSC15-05.1K*) and reported the changes in the 3-year Work Plan, the activities executed since the last meeting, the cooperation with the neighboring RSAHC and the planned activities for 2017, including a technical visit to Seychelles.

l) CBSC15-05.1L RSAHC Report

The RSAHC CB Coordinator introduced the report (*doc. CBSC15-05.1L*) and reported the changes in the 3-year Work Plan, the activities executed since the last meeting, the cooperation with the neighboring NIOHC and the planned activities for 2017. The meeting was also informed that the current CB Coordinator, Mr. Jeff Bryant, will step down as RSAHC CB Coordinator soon and be replaced by either Oman or Pakistan.

m) CBSC15-05.1M SWAtHC Report

The SWAtHC CB Coordinator introduced the report (*doc. CBSC15-05.1M*) and reported the outcomes of the activities executed since the last meeting, the cooperation with the neighboring regions (SEPRHC and MACHC) and the planned activities for 2017 and 2018. He also informed on the support provided by Brazil to Mozambique and Namibia, the MoU signed between Brazil and Suriname and the new fully equipped survey boat received by Brazil for use by the Brazilian Hydrographic School.

Decision 5: to note the reports under agenda item 5.1 (*docs. CBSC15-05.1B, CBSC15-05.1D, CBSC15-05.1E, CBSC15-05.1F, CBSC15-05.1G, CBSC15-05.1H, CBSC15-05.1I, CBSC15-05.1J, CBSC15-05.1K, CBSC15-05.1L and CBSC15-05.1M*).

5.2 Update and closure of the 2016 CBWP

Doc: CBSC15-05.2 Closed 2016 CBWP

Secretary introduced the 2016 CBWP (*doc. CBSC15-05.2*) and acknowledged the efforts from CB Coordinators and Project Leaders in complying with the CB Procedures and in executing the activities in an optimal way. The Chair invited participants to comment and eventually

update the 2016 CBWP. No additional input was provided for the 2016 CBWP (**Annex A**) and the meeting agreed on the following decisions:

Decision 6: to acknowledge the generous in-kind support from Member States and Industry for the execution of the 2016 CBWP.

Decision 7: to acknowledge the work of the RHC CB Coordinators and Project Leaders for the efficient and successful execution of the 2016 CBWP.

6. Regional and national projects for CB

Docs: CBSC15-06A Risk Assessment (SWPHC)

CBSC15-06B Development of Hydrographic Capabilities (Italy)

CBSC15-06C The Canadian Ocean Mapping Research and Education Network (Canada)

CBSC15-06D IALA AtoN Manager Course (Suriname)

CBSC15-06E Definition Study for Long Term Project (EAtHC)

CBSC15-06F TRDC Developments (EAHC)

The Chair invited reports and presentations on ongoing developments in regional and national projects related to CB.

a) SWPHC (Risk assessment)

Australia, on behalf of NZ, presented an update on risk assessment and the PRNI and the highly relevant achievements in the region, with risk assessment and cost-benefit analysis performed for Vanuatu, Cook Islands, Tonga, Niue, and New Zealand, and planned for Samoa, Tokelau, Kiribati and Tuvalu.

He also reported on the open source risk assessment tools under development and the coming test with the Samoa risk assessment. This tool will be made available at a later stage. The meeting agreed on the following decision:

Decision 8: to acknowledge the work done by NZ in the SWPHC with the risk assessments and the PRNI Programme.

b) Italy (Capacity Building Activities)

Italy introduced the report (*doc. CBSC15-06B*) and informed the meeting about the CB initiatives performed by Italy in the past and the possible CB contributions from Italy in the wide Mediterranean Sea. He noted the participation of foreign students from nine coastal States in the Category "A" and Category "B" hydrographic education programmes, the support for on-the-job trainings abroad. He also presented a case study for the establishment of a hydrographic service in Uganda where significant inland navigation occurs, supported by the Italian Navy Hydrographic Institute.

c) Canada (The Canadian Ocean Mapping Research and Education Network - COMREN)

Canada introduced the report (*doc. CBSC15-06C*) and presented the mission of the Network which includes the development of research activities, technology transfer to Industry, development and running of educational programmes related to Ocean Mapping, in liaison with government agencies. This includes opportunities for High Qualified Personnel (HQP) to develop their capacity in, and specialized knowledge of, ocean mapping.

The focus is to provide a collaborative environment for enhancing research activities, for sharing educational curriculum, and to address key research questions of interest to the hydrographic and ocean science community. A priority for COMREN is to work closely with the Canadian Hydrographic Services (CHS) and Natural Resources Canada (NRCan) to identify

and engage in relevant ocean mapping activities associated with various leading-edge initiatives.

He also presented a summary of expertise and capacities of each participant of the programme. The meeting noted the raising number of IBSC recognized programmes and scheme in Canada and the opportunities in the openings for navigation in the Arctic. Participants also agreed that it is necessary for a Hydrographic Service to go beyond CB Phase 3 by engaging with academia, government and Industry in order to contribute to the national infrastructure and to continue to be relevant for the country.

d) Suriname (IALA AtoN Manager Course)

Suriname introduced the report (*doc. CBSC15-06D*) and presented motivation for MAS to engage with IALA and hosting this unique course in the Americas to deliver level 1 Manager training, and how this engagement led to the establishment of the Suriname AtoN Academy (SAA). The first course was organized overlapping with the CBSC15 meeting in order to have the contribution from CBSC Chair, UK (Mr. Jeff Bryant) and the CBSC Secretary in presenting key aspects of safety of navigation from the IHO perspective. This also allowed the IALA instructor and trainees to participate in some sessions of the CBSC15 meeting in order to understand the work of the sub-committee that can be beneficial for their countries.

e) EAthC (Definition Study for a Long Term Project)

France introduced the report (*doc. CBSC15-06E*) and presented to the meeting the general approach of the HydroMAOC Project (OMAOC stands for *Organisation Maritime de l'Afrique de l'Ouest et du Centre*), the analysis of the needs, the CB requirements and the implementation process. He reported on the liaison initiated by the French Ministry of Environment with the World Bank with a MoU signed in April 2016. This MoU provides assistance from France to WACA (Western Africa Coastal Areas), a 400 million US dollar programme that addresses the Western African coastal domain from coastal hazards risk reduction to Blue Economy Development for the Western African region. Recently, Shom has received 200 k€ for a 4 years data rescue project aiming at digitalizing its hydrographic archives on Senegal, Benin and Togo and turning them into end user products. The participation to such a regional programme has also given the opportunity to use the HydroMAOC study guidance and principles at some stage, as another France funded project is under preparation, including skill transfer and expertise sharing on hydrographic aspects such sea level observation and bathymetric surveys.

The EAthC CB Coordinator concluded by inviting the CBSC to consider ways to liaise with more funding agencies through targeted visits to donor agencies and to maintain dialogue with the World Bank.

He also expressed the views to practice other ways of addressing the need to develop hydrographic capabilities in the region by using business plan methodologies with targeted coastal States and morphological analysis to build up scenarios. He highlighted the need to explore ways to develop mentoring and tutoring in West-Central Africa and to develop a regional training center in the region.

The meeting noted the positive impact made by the project and agreed on the following decision and actions:

Decision 9: to acknowledge the contribution from France as a force multiplier for the EAthC Definition Study (HydroMAOC).

Action 8: France to provide presentations about the HydroMAOC to the Secretary (deadline: June 2017).

Action 9: Secretary to upload the HydroMAOC presentations to the CB web pages (deadline: June 2017).

f) EAHC Training, Research and Development Centre (TRDC)

Republic of Korea introduced the report (*doc. CBSC15-06F*) and presented the views from EAHC on the need to develop internal training programmes in each of its coastal States while facing limited human resources to provide training in a sustainable way, having to surpass the language barrier as trainings are in general provided in English, and the need for standardized trainings.

This environment led to the creation of the EAHC-TRDC that is governed by a board of directors, located in Busan (ROK). The support from the TRDC is done locally in the premises and via the website. The fundamental role is to provide Training for Trainers (TFT) in basic hydrography and in foundation cartography. The trainees then multiply the knowledge in their home countries by training staff in the native language.

Another element of the TRDC is the provision of e-learning courses in the region but the opening to other RHCs is being considered. The provision of Maritime Safety Information (MSI) is currently under consideration. TRDC also provides Category "B" programmes in Nautical Cartography and Hydrography offered via the annual IHO CBWPs.

The meeting considered the positive impact of the TRDC in EAHC and agreed on the following action:

Action 10: EAHC/TRDC to consider inviting Member States from other regions to attend the TFT course in 2019 (when appropriate).

g) UK (OECS and CME Projects)

UK introduced the report (*doc. CBSC15-06G*) and presented the Scoping Study element of the OECS (Organization of Eastern Caribbean States) project featured technical visits to all members to assess the status of the national SDI, to identify data gathering requirements and to strengthen regional hydrographic governance. He informed the meeting that since these technical visits the UK's CME (Commonwealth Maritime Economies Programme) and OTsSMP (the Overseas Territories Seabed Mapping Programme) have been initiated which have impacted on the OECS project.

He noted that the OECS Project is being refined to take into account the work completed under the CME and OTsSMP Projects in order to avoid duplications and to optimize the work and that it is anticipated that a significant amount of the survey can be delivered over the next few years. A significant amount of work is being put into identifying opportunities for collaboration with the World Bank Caribbean Regional Oceanscape Project (CROP).

The CME Programme was presented and the UKHO is in the process of identifying a portfolio of Year 2 projects and is looking at opportunities to collaborate and augment IHO CB activities. For the OTsSMP, a survey of the entirety of Anguilla's optically shallow waters was conducted and the majority of OTs have received a technical visit or desk assessment and the remaining OTs will have this completed soon. The survey programme will see a further 3 OTs surveyed this year and the programme will also include Capacity Building in Hydro Governance.

IALA informed that there is a permanent position for AtoN in the Pacific Community (SPC) and a position is planned for the OECS in the near future. The meeting considered the positive outcomes and expected impacts from these projects and agreed on the following decisions and actions:

Action 11: UK to update C-55 of the OECS Members and of the OTs, including the CATZOC shapefiles and report back to the CBSC (deadline: CBSC16).

Action 12: UK to expand the information about the OECS, CME and Overseas Territories Seabed Mapping Programme to the CBSC15 (done, *doc. CBSC15-06G*).

Decision 10: to acknowledge the work done by the UK on CMEP, OECS and OTsSMP Projects.

Decision 11: to note the reports under agenda item 6 (*docs. CBSC15-06A, CBSC15-06B, CBSC15-06C, CBSC15-06D, CBSC15-06E, CBSC15-06F and CBSC15-06G*).

7. Outcomes of the 1st Session of the IHO Assembly and the Strategic Issues of the CBSC

Docs: CBSC15-07A List of Decisions from A-1 (IHO Sec)
CBSC15-07B IHO Capacity Building Strategy (IHO Sec)
CBSC15-07C Proposal to amend the IHO CB Strategy (France)
CBSC15-07D Draft amended IHO CB Strategy (CBSC15)

The Chair informed the meeting on the outcomes of the 1st Session of the IHO Assembly and the list of decisions (*doc. CBSC15-07A*), in particular Decision 16 on PRO-2 regarding e-learning. He also described the main parts of the IHO CB Strategy (*doc. CBSC15-07B*) recalling that e-Learning is already mentioned in the current version. The meeting considered that the CB Strategy is fit for purpose and agreed not to amend the Strategy at this stage.

France introduced the proposed amendments to the IHO CB Strategy (*doc. CBSC15-07C*) and the meeting considered that e-learning is a useful tool for providing training and preparation for trainings, but underlined that there are limitations in delivering competencies and that the cost for development of e-learning content is substantial.

The meeting considered whether IRCC could be requested to provide additional resources for the development of an e-learning platform operated by the Secretariat Staff but concluded that it is not in the remit of the IHO to run e-learning courses. Participants also expressed concerns related to the infrastructure of the recipient countries (like computer resources and internet connection bandwidth).

The meeting agreed that e-learning is one of the tools for delivering CB and there is room for further improvements in the CB Strategy text to highlight the importance of e-learning. France, Norway, UK and USA were tasked to work on the amendments proposed by France to the IHO CB Strategy.

The final aspect was how to get additional funds to progress the development of e-learning (platform and content) to deliver the necessary competencies. The meeting agreed that the IHO should concentrate on MSI and basic training leaving more complex courses to other e-Learning experienced institutions.

The meeting agreed the following decisions and actions:

Decision 12: to acknowledge the remarkable development of the e-learning platform for the delivery of MSI content to Francophone Africa led by France with CB Fund support with potential for other regions and with other contents.

Decision 13: to draft an amended version of the IHO CB Strategy taking into consideration the discussions during CBSC15 and keep it as a working document to be submitted to the Council at a later stage.

Action 13: France, Norway UK and USA to draft an amended version of the Strategy in line with Decision 13 (done during the meeting, *doc. CBSC15-07D*).

Action 14: Chair to address the outcomes of the meeting regarding A-1 Decision 16 on PRO-2 and the proposed line of action during IRCC (deadline: IRCC9).

Action 15: CB Coordinators to promote the delivery of the MSI content via e-learning in all RHCs in need (permanent).

Decision 14: to note the reports under agenda item 7 (*docs. CBSC15-07A, CBSC15-07B, CBSC15-07C and CBSC15-07D*).

8. Operational Issues of the CBSC

8.1 Draft CB Procedures 9, 10, 11 and 12

Docs: CBSC15-08.1A Draft CB Procedure 9 on Technical Visits (IHO Sec)

CBSC15-08.1B Draft CB Procedure 10 on the CB Management Plan (IHO Sec)

CBSC15-08.1C Draft CB Procedure 11 on the Assessment of the Status of CB Phases (UK)

CBSC15-08.1D Draft CB Procedure 12 on a Certificate for the Completion of CB Activities (UK and IHO Sec)

Secretary introduced the draft revised CB Procedures 9 on Technical Visits (*doc. CBSC15-08.1A*), 10 on the CB Management Plan (*doc. CBSC15-08.1B*), 11 on the Assessment of the Status of CB Phases (*doc. CBSC15-08.1C*) and 12 on the certificate for the completion of CB activities (*doc. CBSC15-08.1D*) and informed the meeting that these drafts were considered at CBSC14 and kept as draft for testing before approval.

The meeting considered the benefits of having such procedures but agreed on the need to further improve the draft Procedure 9 to incorporate experiences and lessons learned and the model of the certificate at draft Procedure 12. The meeting agreed the following actions and decisions:

Action 16: Vice-Chair and Secretary to get feedback from the recent visiting teams and liaise with Norway and UK to submit a draft Procedure 9 to CBSC16 considering the need for self-assessment prior to the visit, reference to the IMSAS questionnaire, development of checklists and the access of the existing knowledge in the Secretariat by the Project Leader (deadline: CBSC16).

Action 17: Secretary to investigate the use of the CIS and the CBMS to provide the existing knowledge on the countries to be visited for the Project Leader prior to the visit (deadline: CBSC16).

Action 18: CB Coordinators that not have done so to provide the assessment on the status of CB Phases (Procedure 11) to the Secretary (deadline: October 2017).

Action 19: Secretary to improve the format of the certificate model in Procedure 12 before publishing it (deadline: July 2017).

Decision 15: to approve the CB Procedure 10 (*CB Management Plan*) to enter into force immediately.

Decision 16: to approve the CB Procedure 11 (*Assessment of the Status of CB Phases*) to enter into force immediately.

Decision 17: to approve the CB Procedure 12 (*Certificate for the Completion of CB Activities*) to enter into force immediately.

Action 20: Secretary to publish the CB Procedures 10, 11 and 12 after completion of Action CBSC15/19 (deadline: July 2017).

8.2 CB Management System update

Doc: CBSC15-08.2 CB Management System update (ROK)

ROK introduced the report (*doc. CBSC15-08.2*) and highlighted the key issues for the continuing development of the CB Management System. The idea is to streamline the work of the CBSC, CB Coordinators, Project Leaders and Secretariat based on the CB Procedures, with a web-based system for processing and sharing information in an optimal way.

He informed the meeting that prototype is ready and being tested by the Secretariat with the submissions for CBSC15 and the plan is to have an operational system in time for the CBSC16 meeting. Participants considered the very positive impact of such system with a potential reduction of the workload and increased outcomes. The meeting agreed then on the following decisions:

Decision 18: to acknowledge the work done by ROK for the development of the CB Management System.

8.3 C-55 Status and Developments

Doc: CBSC15-08.3 C-55 Status and Developments (IHO Sec)

IHO Secretary presented the status and developments of the IHO Publication C-55 *Status of Hydrographic Surveying and Nautical Charting Worldwide* (*doc. CBSC15-08.3*) that is now continuously updated from the IHO Country Information System. C-55 output in PDF format is accessible from the IHO website and via the IHO/GIS for the Secretariat.

The meeting noted the new format that is presented in graphical format which is visually more attractive and easy to use.

8.4 Performance Indicators and Statistics

Docs: CBSC15-08.4 Performance Indicators (Chair)

Chair introduced the updated CB-related Performance Indicators and Statistics in accordance with the amended IHO Strategic Plan (2017). The meeting noted that some of the Statistics are incomplete as there were no resources available in the Secretariat for assessing the reports.

8.5 National Hydrographic (Coordinating) Committee (NHC/NHCC)

Docs: CBSC15-07B IHO Capacity Building Strategy (IHO Sec)

The Chair reported on the importance of the establishment of the National Hydrographic (Coordinating) Committee (NHC/NHCC) based on the IHO CB Strategy (*doc. CBSC15-07B*) and participants considered the benefits of having the NHC as a strategic objective for the development of national hydrographic infrastructure.

In order to be consistent with the CB Strategy and with Procedures 9 and 11, the meeting considered that countries with a NHC should have higher priority than those that do not have one. This could be done by means of including this factor in Procedure 4 in order to establish the priority in the Management Plan and in the annual CBWP. The meeting then agreed on the following action:

Action 21: Secretary to prepare a draft revised Procedure 4 taking into account the existence of the NHC in the countries to be supported and submit to CBSC (deadline: CBSC16).

8.6 Review of the 3-year RHC Work Plans 2018-2020

*Docs: CBSC15-08.6A MBSHC 3-year Work Plan
CBSC15-08.6B EAHC 3-year Work Plan*

CBSC15-08.6C EAthC 3-year Work Plan
CBSC15-08.6D SEPRHC 3-year Work Plan
CBSC15-08.6E SWPHC 3-year Work Plan
CBSC15-08.6F MACHC 3-year Work Plan
CBSC15-08.6G SAIHC 3-year Work Plan
CBSC15-08.6H NIOHC 3-year Work Plan
CBSC15-08.6I RSAHC 3-year Work Plan
CBSC15-08.6J SWAtHC 3-year Work Plan

CB Coordinators introduced the 3-year CB Work Plans for their regions and highlighted some minor changes in their plans.

8.7 Discussion on Operational Issues

The meeting briefly considered the above issues and highlighted the immediate need for additional support in the Secretariat for CB activities. The meeting agreed on the following decision:

Decision 19: to note the reports under agenda item 8 (*docs. CBSC15-08.1A, CBSC15-08.1B, CBSC15-08.1C, CBSC15-08.1D, CBSC15-08.2, CBSC15-08.3, CBSC15-08.4, CBSC15-08.6A, CBSC15-08.6B, CBSC15-08.6C, CBSC15-08.6D, CBSC15-08.6E, CBSC15-08.6F, CBSC15-08.6G, CBSC15-08.6H, CBSC15-08.6I and CBSC15-08.6J*).

9. CB Management

9.1 Update of the 2017 CBWP

Doc: CBSC15-09.1 Updated 2017 CBWP (IHO Sec)

Secretary introduced the Updated 2017 CBWP (*doc. CBSC15-09.1*) that was updated by the meeting (**Annex B**), with the following decisions and action:

Decision 20: to cancel the activity P-25 of the 2017 CBWP as Solomon Islands did not succeed in attracting a new cartographer.

Decision 21: to issue a revised version of the Updated 2017 CBWP (Annex B).

Action 22: Secretary to publish the 2017 CBWP in the IHO website (deadline: July 2017).

9.2 Finance Report

Doc: CBSC15-09.2 Finance Report (IHO Sec)

Secretary introduced the CB Finance Report (*doc. CBSC15-09.2*) highlighting the resources available in the 2016 and 2017 CBWPs and the estimation for the 2018 CBWP. The meeting noted the reduced amount of funding from ROK available for the 2017 CBWP. ROK informed that there will be an increase of 50% in the contribution for 2018 in order to reestablish the level of historical contribution. The meeting agreed on the following decisions:

Decision 22: to acknowledge the continuous and generous support of Nippon Foundation from Japan for the IHO CB Fund.

Decision 23: to acknowledge the continuous and generous support of Republic of Korea for the IHO CB Fund.

Decision 24: to approve the CB Finance Report (*doc. CBSC15-09.2*).

9.3 Management Plan

Doc: CBSC15-09.3 Draft 2018 CB Management Plan (IHO Sec)

Secretary introduced the draft 2018 CB Management Plan (*doc. CBSC15-09.3*) and explained the changes done in the submissions received from the RHCs, in particular in terms of the content of Procedure 1 and 4. The meeting endorsed the changes proposed by the Secretary, including the relevant amendments to the Technical Visit to Timor Leste in terms of the number of participants in the visiting team from 6 to 2 in accordance with the draft Procedure 9 and the necessity to provide reasons for the need to have an additional technical visit to the country since the last visit happened in December 2016. The meeting also noted the number of MSDI trainings provided by Industry in recent years while not being able to have qualified instructors from Hydrographic Services. The meeting agreed on the following decision and actions:

Decision 25: to approve the 2018 CB Management Plan (Annex C).

Action 23: Secretary to remove the first two EAHC projects as requested by its CB Coordinator (done during the meeting).

Action 24: EAHC CB Coordinator to provide evidence to the CBSC that a Technical Visit to Timor Leste is necessary in 2018 (deadline: October 2017).

Action 25: RSAHC and NIOHC CB Coordinators to investigate the possibility to merge the MSDI Workshops accepted for 2018 (deadline: October 2017).

Action 26: Chair to report to IRCC that despite the MSDI courses provided by Industry in recent years no instructors from Hydrographic Services are available to deliver MSDI trainings (deadline: IRCC9).

9.4 Adoption of the 2018 CBWP

Doc: CBSC15-09.4 Adopted 2018 CBWP (IHO Sec)

Secretary introduced the draft 2018 CBWP (*doc. CBSC15-09.4*) drafted during the meeting based on the approved 2018 CB Management Plan (**Annex D**) that was subsequently approved by the CBSC by the following decision and action:

Decision 26: to adopt the 2018 CBWP (Annex D).

Action 27: Secretary to publish the Adopted 2018 CBWP in Annex D (deadline: July 2017).

10. Report from the CBSC to the IRCC9 Meeting

The Chair highlighted the key matters to be included in the CBSC Chair report (*doc. IRCC9-07C*) to the IRCC9 Meeting:

- a) Proposed way ahead on the CB Strategy considering e-learning;
- b) Immediate need for increased CB support in the Secretariat;
- c) The adopted 2018 CBWP and associated estimated available resources;
- d) RHC Chair on how to prepare larger joint projects;
- e) Need for permanent CB Coordinators in the regions;
- f) The lack of MSDI trainers in Hydrographic Services despite trainings provided;
- g) Achievements: the growing in investments from the IHO Funds and the success of the IHO CB Programme.

Action 28: Chair to prepare a report to the IRCC9 considering the points discussed under agenda item 10 (deadline: IRCC9).

11. Any other business

No other business was presented.

12. Election of the Chair and Vice-Chair

Doc: CBSC15-12 Nomination of Candidates for Chair and Vice-Chair (IHO Sec)

The Chair introduced the nominated candidates (*doc. CBSC15-12*) for the positions of CBSC Chair and Vice-Chair for the period 2017-2020. He then requested the Vice-Chair to conduct the election for Chair. Mr. Thomas Dehling (Germany) was re-elected by acclamation as CBSC Chair.

The Chair then introduced the two candidates to the position of Vice-Chair, from Italy and Nigeria. The meeting elected Capt. Lamberto Lamberti (Italy) with the support from Australia, Brazil, Canada, Ecuador, Norway and USA. Mr. Olumide Omotoso (Nigeria) received the support from Nigeria, ROK, Suriname, Turkey and UK. Three countries abstained (France, Germany and Italy). The following decisions and action were agreed:

Decision 27: to re-elect Mr. Thomas Dehling (Germany) as Chair and to elect Mr. Lamberto Lamberti (Italy) as the Vice-Chair of the CBSC for the period 2017-2020.

Decision 28: to acknowledge the contribution of Mr. Olumide Omotoso as the Vice-Chair of the CBSC from 2012 to 2017, in particular in matters related to Africa and to assign him as the CBSC Ambassador for Africa.

Action 29: IHO Secretariat to write a letter of acknowledgment to Nigeria for the contribution of Mr. Olumide Omotoso and invite for the continuation of the support as a Member of the CBSC (deadline: July 2017).

13. Next CBSC Meetings (venue and date)

The Chair informed the meeting on the dates and venue for CBSC16 and confirmation of CBSC17 and CBSC18. The meeting agreed on the following decision:

Decision 29: to hold the next meetings as indicated below subject to the confirmation by the IRCC for a back-to-back meeting:

- a) CBSC16: 30 May - 1 June 2018 – Goa, India (to be confirmed by India)
- b) CBSC17: May / June 2019 – Italy (exact dates and places to be decided)
- c) CBSC18: May / June 2020 – Poland (exact dates and places to be decided)

14. Review of the List of Actions

Doc: CBSC15-14 Draft list of actions and decisions from CBSC15 (IHO Sec)

Secretary reported the draft List of Actions and Decisions with deadlines and assigned lead (*doc. CBSC15-14*) that was drafted during the meeting. The list to be circulated with the draft CBSC15 Report for comments as **Annex E** and **Annex F** respectively.

15. Closure

The Chair concluded the meeting thanking the Members, CB Coordinators and Observers for their contribution. He commended the progress made on the execution of the IHO CBWP and related matters. He also expressed, on behalf of all participants, his sincere gratitude to the staff of MAS for the quality of the meeting organization and wished a safe return journey to all participants.

Note: the meeting was followed by a visit to Maritime Authority Suriname and to the Maritime Museum

Annexes:

A – Closed 2016 CBWP

B – Updated 2017 CBWP

C – 2018 CB Management Plan

D – Adopted 2018 CBWP

E – List of Actions

F – List of Decisions

IHO WP Element: Capacity Building Assessment - Technical and High-Level Visits					
No.	Events	Responsible	Budget	Status	Resources
A-01	Technical Assessment & Advice - Samoa (former 2015 CBWP A-07)	SWPHC	6 000,00 €	Led by LINZ 8-12 August 2016 DONE	IHO
A-02	High-level Visit to Tanzania	SAIHC	-	CANCELLED	-
A-03	Technical Assessment & Advice – Tuvalu	SWPHC	3 326,00 €	Led by UKHO 2-13 November 2016 DONE	IHO
A-04	High-level Visit to Azerbaijan	MBSHC	1 800,00 €	Led by IHB 4-7 October 2016 DONE	IHO
A-05	Technical Visit to Timor Leste	EAHC	7 800,00 €	Led by Malaysia 5-8 December 2016 DONE	IHO
A-06	Technical Visit to Montenegro combined with Albania (former 2015 CBWP A-03)	MBSHC	5 000,00 €	Led by Turkey with Greece 28 November-2 December 2016 DONE	IHO
A-07	Technical Visit to Cambodia (former 2015 CBWP A-04)	EAHC	-	POSTPONED	-
A-08	Haiti follow up visit (former 2015 CBWP A-05)	MACHC	-	POSTPONED	-
A-09	Technical Visit to Liberia (former 2015 CBWP A-06)	EAtHC	6 000,00 €	Led by IHB with UKHO 3-5 February 2016 DONE	IHO
A-10	High level visit to the Maritime Security Conference of Lomé, Togo (former 2015 A-08)	EAtHC	5 000,00 €	Led by SHOM 15 October 2016 DONE	IHO
A-11	Technical visit to Niue	SWPHC	-	Led by LINZ 1-5 February 2016 DONE	In-kind from LINZ
		-	34 926,00 €		

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-01	ROK Category A Programme	IHB	90 000,00 €	Led by USM, Hattiesburg, USA 1 August 2016-1 August 2017 DONE	ROK
P-02	Training for Trainers - Basic Hydrography	EAHC	60 000,00 €	Led by KHOA, Busan, Korea 24 October - 4 November DONE	ROK
P-03	ROK Category B Programme (second phase)	IHB	84 700,00 €	Led by KHOA, Busan, Korea 4 April-3 June 2016 DONE	ROK

INTERNATIONAL HYDROGRAPHIC ORGANIZATION

Closed 2016 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-04	Nippon Chart Project	IHB	195 000,00 €	Led by UKHO, Taunton, UK 5 September-16 December 2016 DONE	Nippon
P-05	Seminar on Raising Awareness of Hydrography	MACHC	15 500,00 €	Led by UKHO, Belém, Brazil (with P-19) 12-13 December 2016 DONE	IHO
P-06	E-learning experimentation (MSI)	EAtHC	-	POSTPONED	-
P-07	MBES Processing	NIOHC	8 500,00 €	Led by UKHO, Yangon, Myanmar 6-10 June 2016 DONE	IHO
P-08	Technical Workshop for PICTs in Formulating and Implementing Strategic Development Plans for Hydrography	SWPHC	36 000,00 €	Led by LINZ, Noumea, New Caledonia 28 November-2 December 2016 DONE	IHO
P-09	CB Assistant	IHB	-	CANCELLED	-
P-10	Tide Training Course	SWAtHC	16 400,00 €	Led by DHN, Niteroi, Brazil 3-7 October 2016 DONE	IHO
P-11	MSI Training	MACHC	19 952,00 €	Led by UKHO, Rodney Bay, St Lucia 16-18 August 2016 DONE	IHO
P-12	Workshop on technics, methodology of MBES data processing	SEPRHC	26 911,00 €	Led by DIMAR, Cartagena, Colombia (with P-21) 22-26 August 2016 DONE	IHO
P-13	Chart Scheming	NIOHC	-	NOT FUNDED	-
P-14	MSI Regional Workshop	SWPHC	25 000,00 €	Led by LINZ, Wellington, New Zealand 22-24 August 2016 DONE	ROK
P-15	MBES setting to work project for Mozambique	SAIHC	9 604,00 €	Led by UKHO, Maputo, Mozambique 23 October - 05 November 2016 DONE	IHO
P-16	Multi-beam Training Course	SWAtHC	25 000,00 €	Led by SHN, Buenos Aires, Argentina 12-17 September 2016 DONE	IHO
P-17	MSDI Workshop for Spanish speakers	MACHC	23 658,00 €	Led by SEMAR, Veracruz, Mexico 3-7 October 2016 DONE	IHO
P-18	Introduction to MSDI and Data Management	NIOHC	12 000,00 €	Led by UKHO, Visakhapatnam, India 20-24 June 2016 DONE	ROK
P-19	Satellite Derived Bathymetry Workshop	MACHC	6 500,00 €	With P-05 DONE	IHO
P-20	Advanced ENC Production	NIOHC	8 500,00 €	Led by UKHO, Colombo, Sri Lanka 25-29 April 2016 DONE	ROK

INTERNATIONAL HYDROGRAPHIC ORGANIZATION

Closed 2016 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-21	Workshop on LIDAR technology for shallow waters	SEPRHC	-	With P-12 DONE	ROK
P-22	ENC Production and QA	RSAHC	20 110,00 €	Led by UKHO, Bangkok (Thailande) (with P-26) 30 January-3 February 2017 DONE	IHO
P-23	Satellite Derived Bathymetry	EAHC	-	NOT FUNDED	Cancelled
P-24	Cartographic Production Database System Workshop	EAHC	-	NOT FUNDED	Cancelled
P-25	Multi-beam Survey and Seabed Classification	EAHC	-	NOT FUNDED	Cancelled
P-26	ENC QA (former 2015 CBWP P-13)	NIOHC	12 322,00 €	With P-22	IHO
P-27	Workshop on Multi-beam Echosounder and SSS Systems (former 2015 CBWP P-14)	MBSHC	13 070,00 €	Led by ONHO, Istanbul, Turkey 24-28 October 2016 DONE	IHO
P-28	Regional Training Course in Basic Hydrography and Hydrographic Governance for Southern Africa	SAIHC	-	NOT FUNDED	In-kind from IMO
P-29	Regional Training Course in Hydrographic Field Operator for Francophone Africa	EAtHC	-	NOT FUNDED	In-kind from IMO
P-30	GEBCO Training Project	UHN	-	Led by UNH, Durham, USA August 2016-August 2017 DONE	In-kind from Nippon
P-31	Phase 1 Skills Training Course (former 2015 CBWP P-04)	SAIHC	19 952,00 €	Led by UKHO, Walvis Bay, Namibia 18-22 July 2016 DONE	IHO
	Subtotal of P (Provision)	-	728 679,00 €		

Total	763 605,00 €	
ROK	280 200,00 €	Subtotal ROK
IHO	288 405,00 €	Subtotal IHO
Nippon	195 000,00 €	Subtotal Nippon

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
Updated 2017 CBWP

Updated: 30/06/2017

IHO WP Element: Capacity Building Assessment - Technical and High-Level Visits					
No.	Events	Responsible	Budget	Status	Resources
A-01	Technical visit to Gambia	EAtHC	5 000,00 €	Led by SHOM 23-29 July 2017	IHO
A-02	High-level visit to Seychelles	NIOHC	5 000,00 €	Led by IHO Secretariat 8-12 May 2017 DONE	IHO
A-03	Technical implementation visits to Dominican Republic and El Salvador	MACHC	8 400,00 €	Led by UKHO Dates	IHO
A-04	Technical visit to Azerbaijan	MBSHC	5 000,00 €	Led by Turkey Dates	IHO
A-05	Technical visit to Cambodia (former 2016 CBWP A-07)	EAHC	3 400,00 €	Led by Malaysia 3-5 April 2017 DONE	IHO
A-06	Haiti follow-up visit	MACHC	10 000,00 €	Led by USA 19-22 June 2017 DONE	IHO
A-07	Technical Visit to Cabo Verde	EAtHC	5 000,00 €	Led by SHOM 27 March-1 April 2017 DONE	IHO
		-	41 800,00 €		

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-01	IHO-ROK Category "A" Programme	Secretariat	50 000,00 €	Led by USM, Hattiesburg, USA 1 August 2017-1 August 2018	ROK
P-02	ROK Category B Programme (third phase)	Secretariat	60 000,00 €	Led by KHOA, Busan, ROK 3-28 July 2017	ROK
P-03	IHO-Nippon Foundation CHART Project	Secretariat	195 386,85 €	Led by UKHO, Tauton, UK 4 September-15 December 2017	Nippon
P-04	Training for Trainers - Basic Hydrography	EAHC	25 000,00 €	Led by KHOA, Busan, ROK November 2017	ROK
P-05	MSI E-learning guided sessions.	EAtHC	2 600,00 €	Led by SHOM, Brest, France December 2017	ROK
P-06	MSI Course	MACHC	16 027,00 €	Led by UKHO, Barbados 26-30 June 2017 DONE	IHO

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
Updated 2017 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-07	MSI Course	NIOHC	21 974,00 €	Led by UKHO, Fish Hoek, South Africa 5-7 September 2017	IHO
P-08	MSI Course	SAIHC	14 859,00 €	Combined with P-07	ROK
P-09	SW Pacific Region Industry Survey Project	SWPHC	30 000,00 €	Led by Dates	IHO
P-10	MBES training for Fiji	SWPHC	11 000,00 €	Led by Dates	IHO
P-11	Seminar on Raising Awareness of Hydrography	MACHC	15 500,00 €	Led by UKHO, Varadero, Cuba 27-28 November 2017	IHO
P-12	HydroMOWCA study follow-up	EAtHC	15 000,00 €	Led by Dates	IHO
P-13	Workshop on ENC production and distribution	MBSHC	9 080,00 €	Led by ONHO, Istanbul, Turkey October/November 2017	IHO
P-14	E-learning on specifications for hydrographic surveys	EAtHC	30 000,00 €	Led by Dates	IHO
P-15	Hydrographic Survey for Disaster Management and Relief	EAHC	16 760,00 €	Led by KHOA, Jakarta, Indonesia August 2017	ROK
P-16	Bathymetry training course using RTK technology	SWAtHC	14 400,00 €	Led by DHN, Niteroi, Brazil October 2017	IHO
P-17	Workshop on Bathy Database	SEPRHC	22 000,00 €	Led by DHN, Lima, Peru 14-18 August 2017	IHO
P-18	Use of GNSS for tide correction for survey	EAHC	16 760,00 €	Led by Dates	IHO
P-19	Lidar and Satellite Derived Bathymetry Workshop	EAHC	16 760,00 €	Led by Dates	IHO
P-20	Advanced Chart Production (Bangladesh)	NIOHC	8 500,00 €	Led by UKHO Dates TBC	IHO
P-21	Workshop offshore surveys (geophysical analysis and identification of seamounts)	SEPRHC	29 385,00 €	Led by CIOH, Cartagena, Colombia 23-27 October 2017	IHO
P-22	Digital Photogrammetry with satellite images	SWAtHC	26 200,00 €	Led by SHN, Buenos Aires, Argentina Dates	IHO

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
Updated 2017 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-23	Workshop on Technical Aspects of Maritime Boundaries	MBSHC	16 120,00 €	Led by ONHO, Istanbul, Turkey October/November 2017	IHO
P-24	Advanced Chart Production (Myanmar)	NIOHC	8 500,00 €	Led by UKHO, Yangon, Myanmar Dates TBC	IHO
P-25	Solomon Islands Nautical Cartographer Development	SWPHC	8 000,00 €	Led by AHS, Solomon Is. Dates	IHO
P-26	Basic ENC & ENC Production	RSAHC	14 940,00 €	Led by Dates	IHO
P-27	Data management WORKSHOP	SWAtHC	19 500,00 €	Led by SOHMA, Montevideo, Uruguay Dates	IHO
P-28	PNG Hydrographic Risk Assessment	SWPHC	100 000,00 €		Not funded yet
P-29	Regional Course in Basic Hydrography and Hydrog. Governance for Lusophone Africa	EAtHC SAIHC	-	TBC	In-kind from IMO
P-30	Regional Seminar on Safety of Navigation in the South West Pacific	SWPHC	-	TBC	In-kind from IMO
P-31	GEBCO Training Project	UNH	-	Led by UNH, Durham, USA August 2017-August 2018	In-kind from Nippon*
P-32	E-learning experimentation (MSI) (former 2016 CBWP P-06)	EAtHC	20 000,00 €	Led by SHOM Ongoing	IHO
	Subtotal of P (Provision)	-	834 251,85 €		

Total	876 051,85 €	
IHO	411 446,00 €	Subtotal IHO
ROK	169 219,00 €	Subtotal ROK
Nippon	195 386,85 €	Subtotal Nippon
Not funded	100 000,00 €	Not funded yet

Submitted Projects for 2018

CB Phase	Number of projects submitted	Amount (Euros)	%
0	11	172 580	32,3
1	6	97 241	18,2
2	10	138 210	25,9
3	5	125 465	23,5
4	0	0	0,0
Total	32	533 496,00	100

RHC	Number of projects submitted	Number of projects accepted	Amount (Euros)	%
EAHC	4	4	74 880,00	14,0
EAtHC	5	5	60 200,00	11,3
MACHC	4	4	82 021,00	15,4
MBSHC	3	3	19 490,00	3,7
NIOHC	3	3	32 301,00	6,1
RSAHC	1	1	26 293,00	4,9
SAIHC	3	3	63 176,00	11,8
SEPRHC	2	2	51 385,00	9,6
SWAtHC	3	3	51 950,00	9,7
SWPHC	4	4	71 800,00	13,5
Total	32	32	533 496,00	100,0

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Earmarked projects:

IHO/ROK	0	2	260 100,00	57,2
Japan	0	1	195 000,00	42,8
IHO Sec	0	0	0,00	0,0
Total	0	3	455 100,00	100,0

Total of projects

Total	32	35	988 596,00
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Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
EAHC	2018	EAHC (including the impending IHO MSs)	1	Cartographic Production DB System Development Workshop	To prepare for a shift towards establishing chart publication DB and publication system using latest IT technologies	Through sharing of information on chart publication system and establishing DB among th Member States, construct chart DB of international standards	CB funds for course fees, accomodation costs and return flights	23 050,00 €	EAHC Chair (Dato' Fadzilah bin Mohd Salleh)
EAHC	2018	EAHC (including the impending IHO MSs)	2	Review of Basic Carto Workshop	To enhance capacity for producing paper charts and ENC's for safe navigation	Contribute to the navigational safety in the East Asia sea area	CB funds for course fees, accomodation costs and return flights	23 050,00 €	EAHC Chair (Dato' Fadzilah bin Mohd Salleh)
EAHC	2018	Timor Leste	3	Technical Visit	Timor Leste to be independent in provision of hydrographic and cartographic services and products	To encourage East Timor to join the IHO.	CB funds for course fees, accomodation costs and return flights	2 600,00 €	EAHC Chair (Dato' Fadzilah bin Mohd Salleh)
EAHC	2018	EAHC (including pending IHO Member States (MSs), eg Timor Leste and Cambodia)	4	Maritime Safety Information (MSI) Course	To further improve the communication between MSs (esp. new MSs Vietnam and Brunei Darussalam) NAVAREA XI Coordinator.	To improve knowledge and awareness of HO's role in MSI infrastructure and to establish network amongst EAHC and selected States in NAVAREA XI.	CB funds for course fees, accomodation costs and return flights	26 180,00 €	EAHC Chair (Dato' Fadzilah bin Mohd Salleh)
EAtHC	2018	All African coastal States inside the EAtHC region.	1	Regional awareness seminar on maritime geospatial knowledge	Organization of a Regional Awareness Seminar on Mariitme geospatial knowledge	Raising awareness of Deciders, with potential impact on funding strategies	Fundings to organize a regional awareness seminar	20 000,00 €	Eric Langlois (SHOM)
EAtHC	2018	All African coastal States inside the EAtHC region.	2	HydroMOWCA study follow-up	Promotion and achievement of the EAtHC CB programme	Funding the EAtHC CB Programme set by the HydroMOWCA study	Fundings to perform on-site visits to funding bodies	15 000,00 €	Eric Langlois (SHOM)
EAtHC	2018	All African coastal States inside the EAtHC region.	3	MSI E-learning guided session.	Organize guided sessions for the on-line MSI course	Better access to MSI educationnal material, cost-efficiency related to MSI courses	Financial support to tutoring fees, platform host and domain fees	2 600,00 €	Eric Langlois (SHOM)
EAtHC	2018	All African coastal States inside the EAtHC region.	4	Training Cernter Visits				20 000,00 €	Eric Langlois (SHOM)
EAtHC	2018	All African coastal States inside the EAtHC region.	5	Survey Specification e-Learning Training				2 600,00 €	Eric Langlois (SHOM)

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
MACHC	2018	Bahamas, Dominica, Honduras, Montserrat, St Kitts & Nevis, St Lucia, Turks & Caicos (plus four other nations yet to be determined)	1	Seminar on Raising Awareness of Hydrography (for MACHC Associate and Non Members)	To ensure that countries in the MACHC region are made aware that the provision of hydrographic services is an international obligation under treaty law affecting all Member States (MS) of the IMO and also provides significant national infrastructure and long-term economic benefits. The Seminar is configured to assist countries on how they take the necessary steps to meet their obligation noting that most MACHC countries are IMO MS but not IHO MS.	Participants will gain a better understanding of the regulatory framework which supports hydrography and how this can benefit a coastal state (Blue Economy etc)	The contribution from the CBSC fund will cover travel and subsistence for one representative from each of the 11 countries involved. The representatives will be expected to stay on for the 19th MACHC meeting and be active participants	28 500,00 €	Jeff Bryant, MACHC CB Coordinator
MACHC	2018	Guatemala	2	Technical Visit to Guatemala	To ensure SOLAS obligations are understood and individuals recognise their responsibilities as well as knowing how to obtain support.	Understanding of SOLAS obligations and ways in which to meet them ; A robust MSI assessment and promulgation process ; Improved charting of the region	Travel, accommodation and allowances expenses of the team	8 000,00 €	Jeff Bryant, MACHC CB Coordinator
MACHC	2018	Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras & Panama (PMA)	3	Introduction to Tides and Water Levels Workshop for Spanish Speakers	To train survey operations personnel to understand tides and their impact on hydrographic surveys	The vertical component of hydrographic surveys will be more accurate	Fund travel & subsistence for up to 7 students, together with 2 trainers	24 154,00 €	Jeff Bryant, MACHC CB Coordinator
MACHC	2018	Brazil, Colombia, Cuba, Guatemala, Mexico, Suriname and Venezuela (augmented by at least one nation from the adjoining SEPHC and SWAtHC's)	4	MBES Processing	To train a group of hydrographic surveyors the techniques required to post process MBES data	Improved knowledge of the processing element of MBES data and greater confidence in its use	Fund travel & subsistence for up to 9 students, together with 1 UKHO trainer	21 367,00 €	Jeff Bryant, MACHC CB Coordinator

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
MBSHC	2018	Georgia	1	Technical visit Georgia	To follow up the recommendations of the expert team	To promote in Georgia hydrographic services to meet national and international obligations and to enhance the existing hydrographic capacity (to justify the procurement of new systems/equipment and recruit new staff)	Travel, accommodation and allowances expenses of the team	2 500,00 €	LCDR.Eşref GÜNSAY
MBSHC	2018	Romania, Ukraine, Bulgaria, Lebanon, Georgia, Albania and Algeria.	2	Workshop on MSI	Increase the flow of MSI to the NAVAREA Coordinators for promulgation and emphasize the importance of establishing expertise in the countries to fulfill the role of National Coordinators.	Promote in-country MSI dissemination services to meet national and international obligations	Travel, accommodation and allowances expenses of the team	8 990,00 €	LCDR.Eşref GÜNSAY
MBSHC	2018	Georgia, Malta, Romania and Ukraine.	3	Port and Shallow Water Survey Course	Improve the capacity of MBSHC countries to perform modern surveys with the most recent techniques (MB Echosounder and Side Scan Sonar) in ports and shallow waters.	Promote modern hydrographic surveys to meet national and international obligations	Travel, accommodation and allowances expenses of the team	8 000,00 €	LCDR.Eşref GÜNSAY
NIOHC	2018	Eritrea, Jordan, Maldives, Mauritius, Myanmar, Seychelles, Sri Lanka, Sudan & Yemen	1	Phase 1 Skills Course	The aim is to provide delegates with the skills and knowledge to assess hydrographic information and to decide on the appropriate action - either MSI or liaison with their PCA	To establish a core group of trained persons to deal with MSI and liaison with PCA	Fund Travel & subsistence for up to 10 students, together with two instructors from the UKHO (no fee for trainers time)	18 951,00 €	Jeff Bryant,NIOHC CB Coordinator
NIOHC	2018	Mauritius	2	Survey Technician training	Hydrographic training for one survey technician	Additional trained staff would aid in carrying out ongoing survey projects and will be another step towards future selfsufficiency.	Travel & subsistence for one person to attend the appropriate course in GOA, India	5 800,00 €	Jeff Bryant,NIOHC CB Coordinator
NIOHC	2018	Mauritius	3	Senior Survey Technician training	hydrographic training for one senior survey technician	Additional trained staff would aid in carrying out ongoing survey projects and will be another step towards future selfsufficiency.	Travel & subsistence for one person to attend the appropriate course in GOA, India	7 550,00 €	Jeff Bryant,NIOHC CB Coordinator

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
RSAHC	2018	Bahrain, IR of Iran, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia & UAE (Iraq could be invited depending on how this activity features in the IHO's three Phases – is it 1 or 3?)	1	Development of a Regional Marine Spatial Data Infrastructure (MSDI) Workshop	Introduce MSDI to the attending delegates as the marine component of an SDI and provide practical assistance in developing capability at the regional and national level. MSDI encompasses all marine geographic and business information that supports decision making processes and asset management.	Increased and enhanced understanding of MSDI and its contribution to delivering successful national, regional, and potentially, global development in the marine space. It will do this through the provision of knowledge, understanding, tools and processes, solutions and case studies to better meet the challenges we all now face.	The contribution from the CBSC fund will cover travel and subsistence for one representative from each of the 10 countries involved together with travel & subsistence (and professional fees) for x2 instructors	26 293,00 €	Jeff Bryant,RSAHC CB Coordinator
SAIHC	2018	Angola, Comoros, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles & Tanzania	1	Seminar on Raising Awareness of Hydrography (for SAIHC Associate Members)	To ensure that countries in the SAIHC region are made aware that the provision of hydrographic services is an international obligation under treaty law affecting all Member States (MS) of the IMO and also provides significant national infrastructure and long-term economic benefits. The Seminar is configured to assist countries on how they take the necessary steps to meet their obligation noting that most SAIHC countries are IMO MS but not IHO MS	Participants will gain a better understanding of the regulatory framework which supports hydrography and how this can benefit a coastal state (Blue Economy etc)	The contribution from the CBSC fund will cover travel and subsistence for one representative from each of the 10 countries involved. The representatives will be expected to stay on for the 15th SAIHC meeting and be active participants	22 500,00 €	Jeff Bryant,SAIHC CB Coordinator
SAIHC	2018	Angola, Comoros, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles & Tanzania	2	Development of a Regional Marine Spatial Data Infrastructure (MSDI) Workshop	Introduce MSDI to the attending delegates as the marine component of an SDI and provide practical assistance in developing capability at the regional and national level. MSDI encompasses all marine geographic and business information that supports decision making processes and asset management.	Increased and enhanced understanding of MSDI and its contribution to delivering successful national, regional, and potentially, global development in the marine space. It will do this through the provision of knowledge, understanding, tools and processes, solutions and case studies to better meet the challenges we all now face..	The contribution from the CBSC fund will cover travel and subsistence for one representative from each of the 10 countries involved together with travel & subsistence (and professional fees) for x2 instructors	31 072,00 €	Jeff Bryant,SAIHC CB Coordinator

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
SAIHC	2018	Mozambique	3	MBES equipment configuration/interfacing and setting to work project for INAHINA	1- For 2 qualified Hydrographic Surveyors to ensure the MBES system is properly configured and its performance optimised. 2- To train INAHINA staff to use the system and process the resulting output (both onboard and onshore)	Improve the coverage and quality of survey data (full seafloor coverage) to meet international requirements	Fund Travel & subsistence for two Portuguese speaking Hydrographic surveyors to train the INHINA survey team to use their MBES equipment effectively.	9 604,00 €	Jeff Bryant (SAIHC CB Coordinator)
SEPRHC	2018	Chile, Colombia, Ecuador, Perú, Panamá (observer), plus delegates from SWAtHC and MACHC	1	Workshop on MSDI implementation and development	To improve existing infrastructure for marine geospatial information management, employed to generate hydrographic services and products, as well as others required for the maritime community and governmental agencies	Participants will gain a better understanding of the technical challenges they currently face to improve infrastructure required for the effective marine geospatial information management	The contribution from the CBSC fund will cover travel and subsistence for two representatives from each member state, as well as two delegates from other regional commissions.	22 000,00 €	Jorge Alavera (SEPRH CB Coordinator)
SEPRHC	2018	Chile, Colombia, Ecuador, Perú, Panamá (observer), plus delegates from SWAtHC and MACHC	2	Workshop on LIDAR technology and methodology for shallow waters and coastline hydrographic surveys	To improve knowledge and gain experience on the use of LIDAR technology and methodology for shallow water and coastline hydrographic surveys.	Participants will gain a better understanding of LIDAR technology and will evaluate the viability of its implementation, at the national level, for shallow water and coastline hydrographic surveys.	The contribution from the CBSC fund will cover travel and subsistence for two representatives from each member state, as well as two delegate from other regional commissions; plus trainers for an agency or company with experience in LIDARR data collection and processing	29 385,00 €	Jorge Alavera (SEPRH CB Coordinator)
SWAtHC	2018	Argentina, Brazil, Uruguay, Paraguay, Bolivia, as well as SEPRHC, and MACHC.	1	MSI Workshop	To increase the capacity of Latin American Hydrographic Services (HS) to assess and promulgate navigationally significant information to the wider maritime community	Participants will gain a better understanding of MSI structure and basic procedures. This training will allow the HS to develop products related to safety of navigation in the maritime and waterways areas.	The contribution from the CBSC fund will cover travel and subsistence for 8 foreign students and 2 trainers.	22 200,00 €	Capt. Carvalho (DHN)

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
SWAtHC	2018	Argentina, Brazil, Uruguay, as well as SEPRHC, and MACHC.	2	Port and Shallow Water Survey Course	To increase the knowledge and skills to produce hydrographic information in ports and shallow water areas, improving SWAtHC members' capacity to properly acquire data using MBES and SSS processing	This training will benefit ENC production by providing high quality products and this will result in a greater safety of navigation. Besides it is expected to comply with IHO S-44 standards on bathymetric data.	The contribution from CBSC fund will cover travel and subsistence for 6 foreign students and 2 trainers.	16 500,00 €	Cmdr. Gustavo Jorge Almazan (SHN Argentina)
SWAtHC	2018	Argentina, Brazil, Uruguay, as well as SEPRHC, and MACHC.	3	MSDI and Data Management Workshop	To give participants and understanding of spatial data infrastructures (SDI) for the provision of basi geospatial data	This workshop will allow the Hydrographic Services to improve the development of database modelling and integration. In addition, the more qualified hydrographers would benefit the final quality of Nautical Charts and ENC production.	The contribution from CBSC fund will cover travel and subsistence for 8 foreign students and 2 trainers.	13 250,00 €	Lt. Cmdr. Niki SILVERA (SOHMA Uruguay)
SWPHC	2018	Cook Islands, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu	1	Technical Workshop on Implementing Hydrographic Governance	A practical workshop, led by the Primary Charting Authorities (PCAs). The workshop will assist PICTs for which the PCAs have charting responsibility to understand the requirements of, and develop a plan to implement, Hydrographic Governance.	Increased efficiencies in developing and establishing hydrographic governance to achieve Phase 1 of the IHO CB Strategy.	Funding for travel and subsistence for regional SWP attendees. Travel and subsistence (15 participants for 8 days)	36 000,00 €	Mr Adam Greenland (LINZ)
SWPHC	2018	Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, Niue, PNG, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu	2	MSI Regional Workshop	Establish a reliable flow of MSI information from SWP Island States to NAVAREA X and XIV Coordinators to improve maritime safety and increase maritime domain awareness	Effective and enduring MSI input to NAVAREA X and XIV Coordinators. Lasting contact between SWP Island States and Primary Charting Authorities for the region	Travel and subsistence (13 participants for 6 days)	29 500,00 €	Mr Adam Greenland (LINZ)
SWPHC	2018	Samoa and NZ	3	Samoa Technical Implementation Visit	To ensure SOLAS obligations are understood and individuals recognise their responsibilities as well as knowing how to obtain support.	Understanding of SOLAS obligations and ways in which to meet them ; A robust MSI assessment and promulgation process ; Improved charting of the region	LINZ to assist and advise Samoa to implement the recommendations of the Aug 2016 report.	3 300,00 €	Mr Adam Greenland (LINZ)

Projects submitted by the RHCs (Procedure 1)

Sponsor RHC	Year of Execution	Countries involved	Priority	Project Name	Project Objective	Benefits	Assistance required	Cost (Euro)	Contact Person
SWPHC	2018	Niue and NZ	4	Niue Technical Implementation Visit	Following the initial technical assessment and advice visit, it will be necessary to ensure that Niue fulfils its SOLAS V obligations (V/4 & V/9), by providing support to implement the recommendations of the technical visit.	<ol style="list-style-type: none"> 1. Understanding of SOLAS obligations and ways in which to meet them 2. A robust MSI assessment and promulgation process 3. Improved charting of the region 	LINZ to assist and advise Niue to implement the recommendations of the Feb 2016 report.	3 000,00 €	Mr Adam Greenland (LINZ)
Total:								533 496,00 €	

Projects submitted by the RHCs (Procedure 4)

RHC	Priority	Project Name	1	2	3	4	5	6	7	8	9	Total	Phase	Priority	Resources	Sum	Observation
EAthC	1	Regional awareness seminar on maritime geospatial knowledge	5	10	5	0	10	5	5	-1	5	44	0		20 000	20 000	
SWPHC	1	Technical Workshop on Implementing Hydrographic Governance	3	10	5	4	7	5	5	-1	5	43	0		36 000	56 000	
SAIHC	1	Seminar on Raising Awareness of Hydrography	5	10	5	0	8	5	4	0	3	40	0		22 500	78 500	
NIOHC	1	Phase 1 Skills Course	3	10	5	3	6	5	4	-1	4	39	1		18 951	97 451	
EAthC	4	Training Center Visits	3	10	5	0	10	0	5	0	5	38	0		20 000	117 451	
MACHC	1	Seminar on Raising Awareness of Hydrography	5	10	5	0	7	5	4	-3	5	38	0		28 500	145 951	
SWAtHC	1	MSI Workshop	3	10	3	1	7	5	5	-1	5	38	1		22 200	168 151	
SWPHC	2	MSI Regional Workshop	3	10	5	3	7	3	5	-3	5	38	1		29 500	197 651	
EAthC	2	HydroMOWCA study follow-up	2	10	5	0	10	3	5	-3	5	37	1		15 000	212 651	
EAthC	3	MSI E-learning guided session	3	10	5	0	10	1	5	-2	5	37	1		2 600	215 251	
MACHC	2	Technical Visit to Guatemala	5	10	1	0	8	3	5	0	5	37	0		8 000	223 251	
MBSHC	1	Technical visit Georgia	5	10	1	0	8	5	5	-2	5	37	0		2 500	225 751	
SWPHC	3	Samoa Technical Implementation Visit	5	10	1	3	8	1	4	0	4	36	0		3 300	229 051	
MBSHC	2	Workshop on MSI	3	10	3	0	7	3	5	-2	5	34	1		8 990	238 041	
EAthC	5	Survey specification e-learning guided session	3	5	5	0	10	0	5	0	5	33	2		2 600	240 641	
SWPHC	4	Niue Technical Implementation Visit	5	10	1	3	6	0	4	0	4	33	0		3 000	243 641	
SAIHC	3	MBES Processing and Data Basing Training for Mozambique	3	5	1	3	10	1	4	0	4	31	2		9 604	253 245	
SWAtHC	2	Port and Shallow Water Survey Course	3	5	3	2	7	3	5	-2	5	31	2		16 500	269 745	
EAHC	1	Carto Production DB System Development Workshop	3	1	5	0	6	5	5	0	5	30	3		23 050	292 795	
EAHC	3	Technical Visit for Timor Leste	5	10	1	0	10	1	5	-2	0	30	0		2 600	295 395	
NIOHC	2	Survey Technician training	3	5	1	3	7	3	5	-1	4	30	2		5 800	301 195	
EAHC	4	Maritime Safety Information (MSI) Course	5	10	1	0	10	0	5	-2	0	29	0		26 180	327 375	
SEPRHC	2	Workshop on LIDAR technology and methodology for shallow waters	3	5	3	0	7	3	4	-1	5	29	2		29 385	356 760	
EAHC	2	Review of Basic Carto Workshop	3	1	5	0	6	3	5	0	5	28	3		23 050	379 810	
MACHC	4	MBES Processing	3	5	3	0	8	0	4	0	5	28	2		21 367	401 177	
NIOHC	3	Senior Survey Technician training	3	5	1	3	7	1	5	-1	4	28	2		7 550	408 727	
RSAHC	1	Development of a Regional MSDI Workshop	3	1	3	4	4	5	4	0	4	28	3		26 293	435 020	
SAIHC	2	Development of a Regional MSDI Workshop	3	1	5	3	7	3	3	0	3	28	3		31 072	466 092	
SEPRHC	1	Workshop on MSDI implementation and development	3	1	3	0	7	5	4	0	5	28	3		22 000	488 092	
SWAtHC	3	MSDI and Data Management Workshop	3	5	3	1	7	1	5	-2	5	28	2		13 250	501 342	
MACHC	3	Tides & Water Levels Workshop for Spanish Speakers	3	5	3	0	7	1	4	0	3	26	2		24 154	525 496	
MBSHC	3	Port and Shallow Water Survey Course	3	5	1	0	7	1	5	-2	5	25	2		8 000	533 496	

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
CAPACITY BUILDING SUB-COMMITTEE
MANAGEMENT PLAN 2018

RHC	Priority	Project Name	1	2	3	4	5	6	7	8	9	Total	Phase	Priority	Resources	Sum	Observation
IHO/ROK	-	ROK Category A Programme											2		150 000	150 000	ROK earmarked
IHO/ROK	-	ROK Category B Survey Programme (phase 1/2)											2		110 100	260 100	ROK earmarked
Japan	-	Nippon Chart Project											3		195 000	455 100	Nippon earmarked
EAtHC	1	Regional awareness seminar on maritime geospatial knowledge	5	10	5	0	10	5	5	-1	5	44	0	1	20 000	475 100	0
SWPHC	1	Technical Workshop on Implementing Hydrographic Governance	3	10	5	4	7	5	5	-1	5	43	0	2	36 000	511 100	0
SAIHC	1	Seminar on Raising Awareness of Hydrography	5	10	5	0	8	5	4	0	3	40	0	3	22 500	533 600	0
NIOHC	1	Phase 1 Skills Course	3	10	5	3	6	5	4	-1	4	39	1	4	18 951	552 551	0
EAtHC	4	Training Center Visits	3	10	5	0	10	0	5	0	5	38	0	5	20 000	572 551	0
MACHC	1	Seminar on Raising Awareness of Hydrography	5	10	5	0	7	5	4	-3	5	38	0	6	28 500	601 051	0
SWAtHC	1	MSI Workshop	3	10	3	1	7	5	5	-1	5	38	1	7	22 200	623 251	0
SWPHC	2	MSI Regional Workshop	3	10	5	3	7	3	5	-3	5	38	1	8	29 500	652 751	0
EAtHC	2	HydroMOWCA study follow-up	2	10	5	0	10	3	5	-3	5	37	1	9	15 000	667 751	0
EAtHC	3	MSI E-learning guided session	3	10	5	0	10	1	5	-2	5	37	1	10	2 600	670 351	0
MACHC	2	Technical Visit to Guatemala	5	10	1	0	8	3	5	0	5	37	0	11	8 000	678 351	0
MBSHC	1	Technical visit Georgia	5	10	1	0	8	5	5	-2	5	37	0	12	2 500	680 851	0
SWPHC	3	Samoa Technical Implementation Visit	5	10	1	3	8	1	4	0	4	36	0	13	3 300	684 151	0
MBSHC	2	Workshop on MSI	3	10	3	0	7	3	5	-2	5	34	1	14	8 990	693 141	0
EAtHC	5	Survey specification e-learning guided session	3	5	5	0	10	0	5	0	5	33	2	15	2 600	695 741	0
SWPHC	4	Niue Technical Implementation Visit	5	10	1	3	6	0	4	0	4	33	0	16	3 000	698 741	0
SAIHC	3	MBES Processing and Data Basing Training for Mozambique	3	5	1	3	10	1	4	0	4	31	2	17	9 604	708 345	0
SWAtHC	2	Port and Shallow Water Survey Course	3	5	3	2	7	3	5	-2	5	31	2	18	16 500	724 845	0
EAHC	1	Carto Production DB System Development Workshop	3	1	5	0	6	5	5	0	5	30	3	19	23 050	747 895	0
EAHC	3	Technical Visit for Timor Leste	5	10	1	0	10	1	5	-2	0	30	0	20	2 600	750 495	0
NIOHC	2	Survey Technician training	3	5	1	3	7	3	5	-1	4	30	2	21	5 800	756 295	0
EAHC	4	Maritime Safety Information (MSI) Course	5	10	1	0	10	0	5	-2	0	29	0	22	26 180	782 475	0
SEPRHC	2	Workshop on LIDAR technology and methodology for shallow wat	3	5	3	0	7	3	4	-1	5	29	2	23	29 385	811 860	0
EAHC	2	Review of Basic Carto Workshop	3	1	5	0	6	3	5	0	5	28	3	24	23 050	834 910	0
MACHC	4	MBES Processing	3	5	3	0	8	0	4	0	5	28	2	25	21 367	856 277	0
NIOHC	3	Senior Survey Technician training	3	5	1	3	7	1	5	-1	4	28	2	26	7 550	863 827	0
RSAHC	1	Development of a Regional MSDI Workshop	3	1	3	4	4	5	4	0	4	28	3	27	26 293	890 120	0
SAIHC	2	Development of a Regional MSDI Workshop	3	1	5	3	7	3	3	0	3	28	3	28	31 072	921 192	0
SEPRHC	1	Workshop on MSDI implementation and development	3	1	3	0	7	5	4	0	5	28	3	29	22 000	943 192	0
SWAtHC	3	MSDI and Data Management Workshop	3	5	3	1	7	1	5	-2	5	28	2	30	13 250	956 442	0

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
CAPACITY BUILDING SUB-COMMITTEE
MANAGEMENT PLAN 2018

MACHC	3	Tides & Water Levels Workshop for Spanish Speakers	3	5	3	0	7	1	4	0	3	26	2	30	24 154	980 596	0
MBSHC	3	Port and Shallow Water Survey Course	3	5	1	0	7	1	5	-2	5	25	2	31	8 000	988 596	0
RHC	Priority	Project Name	1	2	3	4	5	6	7	8	9	Total	Phase	Priority	Resources	Sum	
		Procedure 4 maximum score	5	10	5	5	10	5	5	0	5	50					

In-kind

Nippon

GEBCO Training Project

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
Updated 2018 CBWP

Updated: 31/07/2017

IHO WP Element: Capacity Building Assessment - Technical and High-Level Visits					
No.	Events	Responsible	Budget	Status	Resources
A-01	Training Center Visits	EAtHC	20 000 €	Led by Dates	IHO
A-02	Technical Visit to Guatemala	MACHC	8 000 €	Led by Dates	IHO
A-03	Technical visit Georgia	MBSHC	2 500 €	Led by Dates	IHO
A-04	Samoa Technical Implementation Visit	SWPHC	3 300 €	Led by Dates	IHO
A-05	Niue Technical Implementation Visit	SWPHC	3 000 €	Led by Dates	IHO
A-06	Technical Visit for Timor Leste	EAHC	2 600 €	Led by Dates	Not funded yet
		-	39 400 €		

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-01	IHO-ROK Category "A" Programme	Secretariat	150 000 €	Led by USM, Hattiesburg, USA 1 August 2018-1 August 2019	ROK
P-02	ROK Category B Survey Programme (phase 1/2)	Secretariat	110 100 €	Led by KHOA, Busan, ROK 2018	ROK
P-03	IHO-Nippon Foundation CHART Project	Secretariat	195 000 €	Led by UKHO, Tauton, UK September-December 2018	Nippon
P-04	Regional awareness seminar on maritime geospatial knowledge	EAtHC	20 000 €	Led by Dates	ROK
P-05	Technical Workshop on Implementing Hydrographic Governance	SWPHC	36 000 €	Led by Dates	IHO
P-06	Seminar on Raising Awareness of Hydrography	SAIHC	22 500 €	Led by Dates	IHO
P-07	Phase 1 Skills Course	NIOHC	18 951 €	Led by Dates	IHO

INTERNATIONAL HYDROGRAPHIC ORGANIZATION

Updated 2018 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-08	Training Center Visits	EAtHC	20 000 €	Led by Dates	IHO
P-09	Seminar on Raising Awareness of Hydrography	MACHC	28 500 €	Led by Dates	IHO
P-10	MSI Workshop	SWAtHC	22 200 €	Led by Dates	IHO
P-11	MSI Regional Workshop	SWPHC	29 500 €	Led by Dates	IHO
P-12	HydroMOWCA study follow-up	EAtHC	15 000 €	Led by Dates	ROK
P-13	MSI E-learning guided session	EAtHC	2 600 €	Led by Dates	ROK
P-14	Workshop on MSI	MBSHC	8 990 €	Led by Dates	Not funded yet
P-15	Survey specification e-learning guided session	EAtHC	2 600 €	Led by Dates	Not funded yet
P-16	MBES Processing and Data Basing Training for Mozambique	SAIHC	9 604 €	Led by Dates	Not funded yet
P-17	Port and Shallow Water Survey Course	SWAtHC	16 500 €	Led by Dates	Not funded yet
P-18	Carto Production DB System Development Workshop	EAHC	23 050 €	Led by Dates	Not funded yet
P-19	Survey Technician training	NIOHC	5 800 €	Led by Dates	Not funded yet
P-20	Maritime Safety Information (MSI) Course	EAHC	26 180 €	Led by Dates	Not funded yet
P-21	Workshop on LIDAR technology and methodology for shallow waters and coastline hydrographic surveys	SEPRHC	29 385 €	Led by Dates	Not funded yet
P-22	Review of Basic Carto Workshop	EAHC	23 050 €	Led by Dates	Not funded yet
P-23	MBES Processing	MACHC	21 367 €	Led by Dates	Not funded yet

INTERNATIONAL HYDROGRAPHIC ORGANIZATION
Updated 2018 CBWP

IHO WP Element: Capacity Building Provision - Technical Workshops, Seminars, Courses					
No.	Events	Responsible	Budget	Status	Resources
P-24	Senior Survey Technician training	NIOHC	7 550 €	Led by Dates	Not funded yet
P-25	Development of a Regional MSDI Workshop	RSAHC	26 293 €	Led by Dates	Not funded yet
P-26	Development of a Regional MSDI Workshop	SAIHC	31 072 €	Led by Dates	Not funded yet
P-27	Workshop on MSDI implementation and development	SEPRHC	22 000 €	Led by Dates	Not funded yet
P-28	MSDI and Data Management Workshop	SWAtHC	13 250 €	Led by Dates	Not funded yet
P-29	Tides & Water Levels Workshop for Spanish Speakers	MACHC	24 154 €	Led by Dates	Not funded yet
P-30	Port and Shallow Water Survey Course	MBSHC	8 000 €	Led by Dates	Not funded yet
P-31	GEBCO Training Project	UNH	-	Led by UNH, Durham, USA August 2018-August 2019	In-kind from Nippon*
	Subtotal of P (Provision)	-	969 196 €		

Total	1 008 596 €	
IHO	214 451 €	Subtotal IHO
ROK	297 700 €	Subtotal ROK
Nippon	195 000 €	Subtotal Nippon
Not funded	301 445 €	Not funded yet

**15th MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE
IHO-CBSC15
Paramaribo, Suriname, 7-9 June 2017**

LIST OF ACTIONS

N.	Action (Agenda item)	Responsible	Deadline	Status
1.	to write to the CB Coordinators the history of cooperation with the IMO (papers) and the actions requested for interacting with their maritime authorities (4)	Secretary	June 2017	
2.	to provide the FAMOS documents and references for the CBSC Members (5)	Chair	done during the meeting	
3.	to upload the FAMOS documents and references to the IHO website (5)	Secretary	June 2017	
4.	to report the outcomes of the Nautical Cartography events taking place during the 2017 International Cartographic Conference (ICC) to CBSC (5)	USCHC	CBSC16	
5.	to consider inviting Panama for the SEPRHC13 meeting (5)	SEPRHC	July 2017	
6.	to consider having a permanent CB Coordinator in the region (5)	SEPRHC	August 2017	
7.	to update the 2017 CBWP to reflect Decision 2 (5)	Secretary	June 2017	
8.	to provide presentations about the HydroMAOC to the Secretary (6)	France	June 2017	
9.	to upload the HydroMAOC presentations to the CB web pages (6)	Secretary	June 2017	
10.	to consider inviting Member States from other regions to attend the TFT course in 2019 (6)	EAHC/TRDC	when appropriate	
11.	to update C-55 of the OECS Members and of the OTs, including the CATZOC shapefiles and report back to the CBSC (6)	UK	CBSC16	
12.	to expand the information about the OECS, CME and Overseas Territories Seabed Mapping Programme to the CBSC15 (6)	UK	done, doc. CBSC15-06G	
13.	to draft an amended version of the Strategy in line with Decision 13 (7)	France, Norway UK and USA	done during the meeting, doc. CBSC15-07D	
14.	to address the outcomes of the meeting regarding A-1 Decision 16 on PRO-2 and	Chair	IRCC9	

N.	Action (Agenda item)	Responsible	Deadline	Status
	the proposed line of action during IRCC (7)			
15.	to promote the delivery of the MSI content via e-learning in all RHCs in need (7)	CB Coordinators	permanent	
16.	to get feedback from the recent visiting teams and liaise with Norway and UK to submit a draft Procedure 9 to CBSC16 considering the need for self-assessment prior to the visit, reference to the IMSAS questionnaire, development of checklists and the access of the existing knowledge in the Secretariat by the Project Leader (8)	Vice-Chair and Secretary	CBSC16	
17.	to investigate the use of the CIS and the CBMS to provide the existing knowledge on the countries to be visited for the Project Leader prior to the visit (8)	Secretary	CBSC16	
18.	to provide the assessment on the status of CB Phases (Procedure 11) to the Secretary (8)	CB Coordinators (that not have done so)	October 2017	
19.	to improve the format of the certificate model in Procedure 12 before publishing it (8)	Secretary	July 2017	
20.	to publish the CB Procedures 10, 11 and 12 after completion of Action CBSC15/19 (8)	Secretary	July 2017	
21.	to prepare a draft revised Procedure 4 taking into account the existence of the NHC in the countries to be supported and submit to CBSC (8)	Secretary	CBSC16	
22.	to publish the 2017 CBWP in the IHO website (9)	Secretary	July 2017	
23.	to remove the first two EAHC projects as requested by its CB Coordinator (9)	Secretary	done during the meeting	
24.	to provide evidence to the CBSC that a Technical Visit to Timor Leste is necessary in 2018 (9)	EAHC CB Coordinator	October 2017	
25.	to investigate the possibility to merge the MSDI Workshops accepted for 2018 (9)	RSAHC and NIOHC CB Coordinators	October 2017	
26.	to report to IRCC that despite the MSDI courses provided by Industry in recent years no instructors from Hydrographic	Chair	IRCC9	

N.	Action (Agenda item)	Responsible	Deadline	Status
	Services are available to deliver MSDI trainings (9)			
27.	to publish the Adopted 2018 CBWP in Annex D (9)	Secretary	July 2017	
28.	to prepare a report to the IRCC9 considering the points discussed under agenda item 10 (10)	Chair	IRCC9	
29.	to write a letter of acknowledgment to Nigeria for the contribution of Mr. Olumide Omotoso and invite for the continuation of the support as a Member of the CBSC (12)	IHO Secretariat	July 2017	

**15th MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE
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LIST OF DECISIONS

Agenda Item 4

Decision 1: to note the reports under Agenda item 4 (*docs. CBSC15-04A and CBSC15-04B*).

Agenda Item 5

Decision 2: to cancel activity P-5 of the 2017 CBWP. CB Coordinator consider submitting a new proposal when a new cartographer is recruited.

Decision 3: to note the value and effectiveness of preceding RHC meetings with CB-related workshops.

Decision 4: to note SWPHC's commitment in carrying forward hydrographic, nautical cartographic and capacity building activities in close alignment with IHO objectives and goals.

Decision 5: to note the reports under agenda item 5.1 (*docs. CBSC15-05.1B, CBSC15-05.1D, CBSC15-05.1E, CBSC15-05.1F, CBSC15-05.1G, CBSC15-05.1H, CBSC15-05.1I, CBSC15-05.1J, CBSC15-05.1K, CBSC15-05.1L and CBSC15-05.1M*).

Decision 6: to acknowledge the generous in-kind support from Member States and Industry for the execution of the 2016 CBWP.

Decision 7: to acknowledge the work of the RHC CB Coordinators and Project Leaders for the efficient and successful execution of the 2016 CBWP.

Agenda Item 6

Decision 8: to acknowledge the work done by NZ in the SWPHC with the risk assessments and the PRNI Programme.

Decision 9: to acknowledge the contribution from France as a force multiplier for the EAHC Definition Study (HydroMAOC).

Decision 10: to acknowledge the work done by the UK on CMEP, OECS and OTsSMP Projects.

Decision 11: to note the reports under agenda item 6 (*docs. CBSC15-06A, CBSC15-06B, CBSC15-06C, CBSC15-06D, CBSC15-06E, CBSC15-06F and CBSC15-06G*).

Agenda Item 7

Decision 12: to acknowledge the remarkable development of the e-learning platform for the delivery of MSI content to Francophone Africa led by France with CB Fund support with potential for other regions and with other contents.

Decision 13: to draft an amended version of the IHO CB Strategy taking into consideration the discussions during CBSC15 and keep it as a working document to be submitted to the Council at a later stage.

Decision 14: to note the reports under agenda item 7 (*docs. CBSC15-07A, CBSC15-07B, CBSC15-07C and CBSC15-07D*).

Agenda Item 8

Decision 15: to approve the CB Procedure 10 (*CB Management Plan*) to enter into force immediately.

Decision 16: to approve the CB Procedure 11 (*Assessment of the Status of CB Phases*) to enter into force immediately.

Decision 17: to approve the CB Procedure 12 (*Certificate for the Completion of CB Activities*) to enter into force immediately.

Decision 18: to acknowledge the work done by ROK for the development of the CB Management System.

Decision 19: to note the reports under agenda item 8 (*docs. CBSC15-08.1A, CBSC15-08.1B, CBSC15-08.1C, CBSC15-08.1D, CBSC15-08.2, CBSC15-08.3, CBSC15-08.4, CBSC15-08.6A, CBSC15-08.6B, CBSC15-08.6C, CBSC15-08.6D, CBSC15-08.6E, CBSC15-08.6F, CBSC15-08.6G, CBSC15-08.6H, CBSC15-08.6I and CBSC15-08.6J*).

Agenda Item 9

Decision 20: to cancel the activity P-25 of the 2017 CBWP as Solomon Islands did not succeed in attracting a new cartographer.

Decision 21: to issue a revised version of the Updated 2017 CBWP (Annex B).

Decision 22: to acknowledge the continuous and generous support of Nippon Foundation from Japan for the IHO CB Fund.

Decision 23: to acknowledge the continuous and generous support of Republic of Korea for the IHO CB Fund.

Decision 24: to approve the CB Finance Report (*doc. CBSC15-09.2*).

Decision 25: to approve the 2018 CB Management Plan (Annex C).

Decision 26: to adopt the 2018 CBWP (Annex D).

Agenda Item 12

Decision 27: to re-elect Mr. Thomas Dehling (Germany) as Chair and to elect Mr. Lamberto Lamberti (Italy) as the Vice-Chair of the CBSC for the period 2017-2020.

Decision 28: to acknowledge the contribution of Mr. Olumide Omotoso as the Vice-Chair of the CBSC from 2012 to 2017, in particular in matters related to Africa and to assign him as the CBSC Ambassador for Africa.

Decision 29: to hold the next meetings as indicated below subject to the confirmation by the IRCC for a back-to-back meeting:

- a) CBSC16: 30 May - 1 June 2018 – Goa, India (to be confirmed by India)
- b) CBSC17: May / June 2019 – Italy (exact dates and places to be decided)
- c) CBSC18: May / June 2020 – Poland (exact dates and places to be decided)